METHOD AND APPARATUS FOR OPTIMIZING SUPPLY MODULATION IN A TRANSMITTER

Abstract Of The Disclosure

A transmitter (200) has a compression detector for sensing the level of compression (110) in a signal that is being transmitted. The transmitter also has a radio frequency power amplifier (RFPA) (414) that is supplied by a supply modulator (426). The supply modulator provides a dynamic supply bias to the RFPA to maintain a desired amount of compression in the signal being transmitted. The supply modulator is responsive to a modulation signal (207) created by substantially following the envelope (214) of the signal to be transmitted (212). However, various signal and operational conditions can occur which cause the compression level to deviate (506) from the desired level. To maintain the desired compression level, the compression detector provides an output that is used to adjust the modulation signal from following the envelope of the signal to be transmitted in an unadjusted manner.